

Unit 1 Studying Computer Science

1 In pairs, discuss the following questions.

- Why did you decide to pursue a degree in computer science?
- Which areas of your studies do you find most interesting?
- Which courses are you taking this term?
- Which elective courses did you take in your previous year of study?
- What sort of practical work is included in your courses?



Focus on:

vocabulary related to studies
discourse markers
strategies of terminology
acquisition: word classes &
derivation, collocations
levels of formality

2 Connect the parts of phrases related to your studies.

1	to complete	compulsory/mandatory courses, elective courses
2	to take	seminars, lectures, tutorials, workshops
3	to undergo	enrolment requirements, advancement requirements
4	to attend	a lecturer, a teaching assistant, an assistant professor, an associate professor
5	to submit	peer review
6	to be conducted/led by	a paper, an assignment, a presentation, an abstract
7	to pursue	a thesis, a dissertation, a grant proposal
8	to avoid	a grade point average of ...
9	to promote	academic integrity
10	to earn	plagiarism
11	to write/submit/defend	a degree in computer science

3 Discuss and compare the structure of your study programme

- with that of a colleague (in terms of elective courses)
- with one offered by a university abroad.

4 What career opportunities are available to computer science graduates?

What specialized skills are necessary for these roles?

What additional skills do potential employers typically look for in these positions?

5 In the text below, some nouns are missing. Choose among the following ones to fill the gaps.

systems	languages	computation	range	intelligence	discipline
interaction	techniques	engineering	software	graphics	structures

Computer science is the study of the theoretical foundations of information and computation and of practical _____ for their implementation and application in computer systems. Computer scientists invent algorithmic processes that create, describe, and transform information and formulate suitable abstractions to model complex _____. As a discipline, computer science spans a _____ of topics from purely theoretical studies of algorithms and the limits of computation to the practical issues of implementing computing systems in hardware and _____. The IEEE Computer Society identifies four areas that it considers crucial to the _____ of computer science: theory of computation, algorithms and data _____, programming methodology and programming _____, and computer elements and architecture. In addition to these four areas, CSAB also identifies fields such as software _____, artificial _____, computer networking and communication, parallel computation, distributed _____, computer-human _____, computer _____ and visualization, operating systems, and numerical and symbolic computation as being highly important areas of computer science.

Adapted from Bhuyan, D. (2015): A Complete Guide to Career Planning

6 Which verbs are used in the text in these phrases?

to _____ algorithmic processes
 to _____ abstractions
 to _____ something crucial to
 to _____ something as being important ...
 to _____ a range of topics

7 What is the difference between adjectives and adverbs? Underline them in the text.

8 Derive nouns, adjectives and adverbs from the given verbs.

VERB	NOUN	ADJECTIVE	ADVERB
to theorise			
to apply			
to rely			
to suit			

FORMALITY IN SPEECH AND WRITING

9 Compare the two sentences and answer the questions.

Version A

In an effort to make a positive impression on another person, the brain can cause people to adopt characteristics of the other person's speech style and even alter their accent to fit that of the person they are talking to.

Version B

If you're trying to get on well with someone, your brain can make you take on aspects of the way they talk and even change your accent to sound like theirs.

Navigate C1, p. 81

1. Is the information in both versions the same? Which version sounds more formal?
2. What differences do you notice?

10 To make a text sound more formal, i.e. to increase the level of formality of a text, use nouns instead of verbs. Here are some verbs which are frequently used in academic discourse. Turn them into nouns and combine them with suitable verbs.

to explore => to conduct, begin, offer an exploration

to investigate =>

to emphasise =>

to argue =>

to analyse =>

to describe =>

to classify =>

to illustrate =>

to assume =>

11 Transform these sentences using nominalisations instead of the underlined words.

- a. He works a lot, so he feels stressed-out. (results in)
- b. People often feel happy when they are fulfilled. (associated with, a sense of)
- c. The number of years people are expected to live has been increasing. (There)
- d. China's huge population continued to expand rapidly during the 1980s. (saw)

12 Which verbs could be used in these examples?

- a. When selecting a new venture partner, the founder will _____ greater emphasis on integrity than ability.
- b. Research _____ the argument that social networking could be the single most important tool one can have.

- c. Figure 1 _____ an illustration of students' academic performance (cumulative GPA) by groups.
d. He _____ the assumption that life is impossible under any other arrangement of physical laws and constants.

13 With the help of a thesaurus or corpus, replace the words in bold print with more formal synonyms.

Computer science is a **quickly** evolving field that continues to shape the world we live in. With advancements in technology, there is a **bigger and bigger** demand for professionals with computer science **knowledge**. Artificial intelligence is revolutionizing **many** sectors by implementing machine learning. Robotics **is about** building robots that can **copy** human actions, from building cars to **helping** in surgery. Cybersecurity and ethical hacking are **very important** in protecting sensitive information and preventing cyber threats. UX design is **very important** in creating user-friendly interfaces and **making** user experiences **better**.

Adapted from Coursera: Computer Science Jobs for the Future. <https://www.coursera.org/gb/articles/computer-science-jobs-for-the-future>

SPEAKING SKILLS

14 SMALL TALK TOPICS

Think of some topics that can be discussed with anyone, even complete strangers.
Which topics would you prefer to avoid?

15 PHRASES

Think of a few suitable phrases

- to initiate a conversation
- to encourage further dialogue
- to end a conversation in a polite manner

16 DISCOURSE MARKERS IN CONVERSATION

- a. Employing discourse markers skilfully in your conversations can enhance your English fluency. What exactly do these discourse markers convey?

<i>apparently</i>	<i>fortunately</i>	<i>theoretically</i>	<i>incidentally</i>
<i>actually</i>	<i>obviously</i>	<i>presumably</i>	<i>clearly</i>

- b. Complete the phrases with the given words.

you	whole	honestly	honest	way	of
saying	speaking	speak	fact	case	truth

- | | |
|--------------------------|----------------------------|
| 1. Mind ___you___ | 7. On the _____ |
| 2. To be _____ | 8. So to _____ |
| 3. Quite _____ | 9. Broadly _____ |
| 4. To tell you the _____ | 10. In any _____ |
| 5. As a matter of _____ | 11. Speaking _____ (which) |
| 6. As I was _____ | 12. By the _____ |

- c. Which discourse markers would you use in the following sentences?

- The film has had great reviews, but _____, I didn't like it very much. _____ films, how is your project coming along?
- A: Do you think you'll go back to the same hotel? B: Well, _____ we were a bit disappointed the last time we were there. It wasn't a great place to stay. _____, it didn't cost a lot.

- A: Have you started your art course yet? B: _____, I'm doing the course on digital photography.
- A: What did you think of the meeting? B: Well, _____, I thought it was successful. _____, I thought Sarah was a bit irritating - she didn't keep to the point at all.

Adapted from Word Skills Advanced

d. Which prepositions are missing in these sentences?

- _____ **the average**, a class of 31-40 students was most common.
- _____ **the ground**, meanwhile, human rights violations worsened.
- I had no credentials. However, _____ **luck would have it**, I knew someone who did.
- _____ **his credit**, he sought to introduce scientific methods into medical practice.
- The recognition of patterns of nature, and the seeking of explanations for them, is what science is all about. _____ **this reason**, we can safely say that astronomy is the oldest science.
- _____ **the sake of simplicity** / _____ **the interest of simplicity**, we call the above transformations NR-type transformations.
- Every project had to include specifications about the objectives to be reached. _____ **this end**, the students received continuous tutorial support from the teachers
- _____ **the look of things**, most of these students are in their thirties and forties.
- After validation, the order is accepted for processing. _____ **this stage**, an XML solution becomes especially valuable.
- Economic losses from severe weather events have doubled every decade. _____ **this rate**, annual losses will reach \$150 billion within ten years.

Adapted from CoCA

LISTENING SKILLS

17 Discuss the following questions:

- What indicators suggest that the person you're conversing with is genuinely attentive to what you are saying (verbal/non-verbal)?
- Do you think listening skills are innate, or can they be acquired over time?
- Could you provide some advice for individuals seeking to enhance their listening skills?